demand exceeds 1 MW, latest by 27.1.2009. The SERCs of twenty States have issued regulations for introduction of open access in distribution and seventeen SERCs have specified the methodology for calculation the open access surcharge.

(c) There are no systemic hurdles in the framework.

(d) Does not arise.

Utilization of installed **power capacity**

*100. SHRI SITARAM YECHURY Will the Minister of POWER be pleased to state:

(a) the details of installed capacity, project-wise and grid-wise as on 2006;

(b) the details of utilization of installed capacity;

(c) whether it is a fact that the country is not in a position to utilize the installed capacity to its full length in generation due to age,seasonal fluctuations and fuel constraints; and

(d) if so, the measures initiated by Government to see that the installed capacity may be fully utilized?

THE MINISTER OF POWER (SHRI SUSHILKUMAR SHINDE): (a) The installed generation papacity in the country as on 31st March, 2006 was 1,24,287 MW comprising 82,410 MW Thermal, 33,326 MW Hydro, 3,360 MW Nuclear and 6,191 MW of Renewable Energy Sources. The region/ grid-wise and project-wise details in this regard are given in the Annexure. [See Appendix 210 Annexure No. 1]

(b) and (c) The utilization of installed capacity of a generating unit is linked to the type of generation. While the thermal units are meant to be utilized continuously as base load units, hydro units are to be utilized depending on availability of water/reservoir level. Thus, utilization of installed capacity is effectively applicable to thermal (including nuclear) generating units and expressed in terms of Plant Load Factor (PLF). The PLF of thermal and nuclear units depends on a number of factors such as vintage of the unit, forced and planned outages, availability of required quality and quantity of fuel, etc. Indicator of performance of hydro generating unit is its

availability (excluding the time required for its planned maintenance and attending to forced outages) and actual energy generation *vis-a-vis* design energy.

Sector-wise details of utilization of Thermal and Nucelar Power plants in terms of PLF and availability of machines and generation with respect to their Design Energy for hydro projects for the year 2005-06 are given below:

Sector	Thermal®		Nuclear			Hydro
	Target PLF (%)	Actual PLF (%)	Target PLF (%)	Actual PLF (%)	Availability (%)	Generation achievement w.r.t. Design Energy (%)
Central	79.0	82.1	58.8	63.2	86.8	94.7
State	71.3	67.1	—	—	89.2	92.6
Private	82.3*	85.4*	—	—	98.3	119.5
All India Total	74.7	73.6	58.8	63.2	89.2	94.1

@Coal & Liquid *Private Utilities only

The calorific value, moisture, volatile matter and ash content of coal have a bearing on the performance of coal based power stations. Availability of water during monsoon and non-monsoon season as well as irrigation requirements influence utilization of hydro power stations. Utilisation of gas based stations has been significantly affected by availability of gas. Loss of generation of the order of 23.88 Billion Unit (BU) and 22.3 BU during 2005-06 & 2006-07 (April, 2006 to January, 2007) was assessed with reference to 90% PLF. Loss of generation of about 1.65 BU was reported in coal based power stations during 2005-06 but no such loss has been reported during the current year. Utilisation of liquid fuel based power stations, especially Naphtha based plants, has been affected by its highcost.

(d) The following steps have been/are being taken by the Government of India to ensure full utilisation of the installed capacity:

(i) Continuous inter-action of CEA engineers with Power Station Authorities, BHEL and other concerned agencies for solving operation and maintenance problems and site visits for monitoring the performance of units.

(ii) Renovation, modernization and life extension of old and inefficient generating units with interest subsidy on loans by the Power Finance Corporation (PFC) and Rural Electrification Corporation (REC) under "Accelerated Generation and Supply Programme" (AG&SP).

(iii) Enhancement of Plant Load Factor (PLF) of thermal power stations with PLF below 60% through tie-up with well performing power utilities under "Partnership in Excellence" Programme, Government of India has provided grant for consultancy charges of these better performing organizations and Power Finance Corporation provided loan Assistance at subsidized rate of interest. The programme envisages improvement in PLF through toning up of operation and maintenance (O&M) practices, training of operating personnel, capital overhaul, essential renovation modernization (R&M), etc., as a precursor to major R&M/Life Extension works based on residual life assessment (RLA) studies, subject to techno-economic viability.

Proposal for oceanarium at Kochi

571. SHRI THENNALA G. BALAKRISHNA PILLAI: Will the Minister of EARTH SCIENCES be pleased to state:

(a) whether Government have any proposal to start an oceanarium at Kochi;

(b) if so, the detailc thereof;

(c) whether Government of Kerala has submitted any proposal in this regard; and

(d) if so, the action taken by Government in this regard?

THE MINISTER OF EARTH SCIENCES (SHRI KAPIL SIBAL): (a) and (b) The Ministry has proposed to set up an oceanarium in the Eleventh Five Year Plan, which is under consideration of the Planning Commission. Once the proposal is approved, the Ministry will workout the further course of action.

(c) Yes Sir.